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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte LARRY STEVENS

Appeal 2009-000274
Application 09/228,325
Technology Center 3700

Decided: April 27, 2010

Before JOHN C. KERINS, STEFAN STAICOVICI and
FRED A. SILVERBERG, *Administrative Patent Judges*.

KERINS, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Larry Stevens (Appellant) seeks our review under 35 U.S.C. § 134 of the final rejection of claims 1, 2, 5-18 and 44-53, which are the only claims pending in the application. This is Appellant's second appeal before the Board of Patent Appeals and Interferences. In the first appeal (2002-0980, Decision mailed March 27, 2003), the decision of the Examiner to reject claims 1, 2, and 4-18 was reversed. We have jurisdiction under 35 U.S.C. § 6(b) (2002). An oral hearing was held on April 13, 2010, with Richard C. Gilmore appearing on behalf of Appellant.

SUMMARY OF DECISION

We REVERSE.

THE INVENTION

Appellant's invention is directed to a basketball backboard assembly having a frame structure, a backboard, and either a catalyzed elastomeric or silicone adhesive or a silicone-based adhesive sandwiched between and connecting the frame and the backboard. Independent claim 1, reproduced below, is illustrative of the claimed subject matter:

1. A basketball backboard assembly that is sized and configured for playing the game of basketball, the basketball backboard assembly comprising:

a basketball backboard frame structure having a bonding surface;

an acrylic basketball backboard having a bonding surface; and

a catalyzed elastomeric adhesive sandwiched between the frame bonding surface and the backboard bonding surface, wherein the elastomeric adhesive provides sufficient adhesion and flexibility to the acrylic backboard and frame structure bonding surface to be used in the game of basketball.

THE REJECTIONS

The Examiner relies upon the following as evidence of unpatentability:

Hankele	US 3,809,401	May 7, 1974
Skedeleski	US 4,792,316	Dec. 20, 1988
Skedeleski	US 4,955,314	Sep. 11, 1990
Chung	US 6,056,622	May 2, 2000

Appellant's Admitted Prior Art that the use of double-sided adhesive tape to attach backboards to a frame structure was known in the art. (Spec., p. 2, ll. 3-8)(hereafter "AAPA").

"Information About Specialty Materials for High Technology Applications," Dow Corning® Q3-6093 Silicone Adhesive, © Dow Corning Corporation 1987. (hereafter "Dow Corning data sheet").

Ichemco data sheet, Dow Corning® Silicone Pressure Sensitive Adhesives, web page located at:
<http://www.ichemco.it/ENG/tab/siliconepsa.asp> (hereafter, "Ichemco").

The Examiner has rejected:

(i) claims 1, 2, 5, 6, 14, 15 and 44-53 under 35 U.S.C. § 103(a) as being unpatentable over the AAPA in view of Chung, Hankele, Skedeleski '316, and Skedeleski '314, and further in view of the Dow Corning data sheet;

(ii) claims 7-10 and 16-18 under 35 U.S.C. § 103(a) as being unpatentable over the AAPA in view of Chung, Hankele, Skedeleski '316,

Skedleski '314, the Dow Corning data sheet, and further in view of Official Notice taken that the use of glass bead spacers is well known in the art;

(iii) claim 13 under 35 U.S.C. § 103(a) as being unpatentable over the AAPA in view of Chung, Hankele, Skedleski '316, Skedleski '314, the Dow Corning data sheet, and further in view of Official Notice taken that the use of printed images on a backboard is well known in the art; and

(iv) claims 50-53 under 35 U.S.C. § 103(a) as being unpatentable over the AAPA in view of Ichemco.

ISSUE

Whether the Examiner has adequately supported the conclusion that the subject matter presented in the claims would have been obvious in view of the admitted prior art teaching the attachment of a backboard to a backboard frame using double-sided adhesive tape with a foam center, in view of various teachings directed to the use of silicone adhesives?

PRINCIPLES OF LAW

A claim is unpatentable under 35 U.S.C. § 103(a) if “the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.” The question of obviousness is resolved on the basis of underlying factual determinations including (1) the scope and content of the prior art, (2) any differences between the claimed subject matter and the prior art, (3) the level of skill in the art, and (4) where in evidence, so-called secondary considerations. *Graham v. John Deere Co.*,

383 U.S. 1, 17-18 (1966). *See also KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 407 (2007) (“While the sequence of these questions might be reordered in any particular case, the [*Graham*] factors continue to define the inquiry that controls.”).

While there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness, “the analysis need not seek out precise teachings directed to the specific subject matter of the challenged claim, for a court can take account of the inferences and creative steps that a person of ordinary skill in the art would employ.” *KSR Int’l.*, 550 U.S. at 418.

When a work is available in one field of endeavor, design incentives and other market forces can prompt variations of it, either in the same field or a different one. If a person of ordinary skill can implement a predictable variation, § 103 likely bars its patentability. For the same reason, if a technique has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond his or her skill.

Id. at 417.

ANALYSIS

Claims 1, 2, 5, 6, 14, 15 and 44-53--Obviousness--AAPA in view of Chung, Hankele, Skedelecki '316, Skedelecki '314, and Dow Corning data sheet

Appellant argues claims 1, 2, 5, 6, 14 and 15 as a group. Additional arguments for claims 44 and 45; for claims 46 and 47; for claims 48 and 49; for claims 50 and 51; and for claims 52 and 53, respectively, are presented

under separate headings in the Appeal Brief. Independent claim 1 will be taken as representative of the group in which it is included.

Claim 1 differs from the AAPA in that it recites the use of a catalyzed elastomeric adhesive, which can be a catalyzed silicone adhesive, in lieu of the prior art use of a double-sided adhesive tape. The AAPA relied on by the Examiner establishes that it was known in the art at the time of the present invention to secure a basketball to a backboard using a double-sided adhesive tape having a foam center. The Examiner, relying on the disclosure of the use of silicone glue (Chung), epoxy or silicone adhesives (Hankele), silicone adhesive (Skedelecki '316), and silicone adhesive having a cushioning effect (Skedelecki '314), on various articles of sporting goods, found that,

. . . those knowledgeable in the sporting goods adhesion art were aware of silicon [sic, silicone] adhesives *and their suitability and advantages when considering cost, cushioning and superior adhesive qualities where sporting goods will be used under severe conditions*, such as outdoors.

(Answer 4)(emphasis added).

With the exception of the Skedelecki '316 patent making brief mention of having a silicone adhesive fill a void between a surfboard tip and a safety tip adhered thereto by the silicone adhesive so as to provide a cushioning effect (Skedelecki '316, col. 2, ll. 59-63), there does not appear to be any specific discussion of cost, cushioning or superior adhesive qualities of any of the adhesives or glues disclosed in these references, relative to any other types of adhesives or other means of attaching or

bonding objects to one another. As such, the Examiner's finding stretches beyond what those references actually evidence was known in the art.

The Examiner concludes, in view of the above finding, that it would have been obvious to use a silicone adhesive to secure an acrylic backboard to a backboard frame, in lieu of using a double-sided adhesive tape with a foam center,

... in order to lower production costs and manufacture a more durable backboard in order to increase the player's satisfaction with the product. Also it would have been obvious ... to have sought and selected the most suitable adhesive from among the equivalent silicone adhesives available at the time of the invention including Dow Q3-6093 by the routine optimization expected by one of skill in the art ...

(*Id.*).

This conclusion is not adequately supported by the evidence of record. The AAPA does not, contrary to the apparent position taken by the Examiner, evidence that it was generally known in the art that the use of a double-sided adhesive tape resulted in a costly and time-consuming production process. Appellant discusses that the use of the double-sided tape is time and labor intensive, but not in the context that this was considered to be a problem generally known in the art, rather that the inventor herein regarded this as being a significant problem. (Spec., p. 2, ll. 9-17). Even if we accept the premise that a person of ordinary skill in the art would generally be attuned to looking for ways to lower production or manufacturing costs (*see, e.g.*, Answer 10), the prior art of record does not establish that the use of a silicone adhesive would necessarily or likely result in lowered production costs when compared with the use of double-sided

adhesive tape. The Examiner has not identified, and we are unable to find, anything in the cited patents, or in the Dow Corning data sheet, that addresses the cost of using a silicone adhesive as compared with other attachment or securement means, and, in particular, a double-sided adhesive tape, whether for uses similar to Appellant's or otherwise.

The Examiner also asserts, as seen in the above quote, that the use of a silicone adhesive in lieu of double-sided adhesive tape would result in a more durable backboard. Again, the prior art of record appears to be devoid of any persuasive evidence that a person of ordinary skill in the art would understand this to be the result of making such a substitution. Without reaching the issue as to whether any of the Chung, Hankele, Skedleski '316, and Skedleski '314 patents do or do not constitute nonanalogous art, we are not persuaded that any of the references evidence that the use of a silicone adhesive would result in a durability greater than that obtained when using double-sided adhesive tape. Similar to the cost aspect discussed above, the prior art appears to lack a comparison of silicone adhesives to other attachment means in terms of their effect on adherence of the two elements joined by the adhesive, or in terms of the overall durability of the finished product.

The Examiner further advocates that the subject matter of these claims would have been obvious in view of at least two of the rationales identified in the *KSR* case as being potential indicators of obviousness. First, the Examiner asserts that the claims involve nothing more than a combination of prior art elements according to known methods, with the obtention of a predictable result. (Answer 9-10). Second, the claims are asserted to

involve the application of a known technique to a known device, again with the obtention of predictable results. (Answer 10-11).

The Examiner posits, with respect to the former, that since Appellant recognized a problem with the use of double-sided adhesive tape in attaching backboards to frames, in the form of being time and labor intensive and thus costly, then so must have others having ordinary skill in the art. This assumes facts not in evidence. It has been recognized in patent jurisprudence that it is often the recognition of a problem and the provision of a solution to that problem that ultimately leads to a conclusion that an invention is patentable. Here, we find no evidence that the problem was recognized by persons other than Appellant.

The Examiner has further not pointed to any evidence in the prior art that it would have been known in the art that the use of a silicone adhesive in lieu of a double-sided adhesive tape would result in time, labor, and/or cost savings. Additionally, we cannot accept the Examiner's apparent position (*see, e.g.*, Answer 10) that persons of ordinary skill in the art would somehow recognize double-sided adhesive tape as being one of "various equivalent attachment means", in a group that also include adhesives such as a catalyzed silicone adhesive. Merely asserting that various attachment means would be seen as being equivalent does not make it so.

The Examiner does note that the Dow Corning Q3-6093 silicone adhesive is described in the Dow Corning data sheet as having a physical form in its cured state of "flexible rubber", and that Appellant notes at page 1 of the Specification that flexibility is required in the bond between the backboard and support frame so that impact energy can be dissipated. (Answer 10-11). The Dow Corning silicone adhesive, being a "flexible

rubber” in cured form, seemingly would be understood by a person having ordinary skill in the art as having some degree of elasticity, cushioning effect and energy dissipation capability. There is, however, no indication as to whether persons of ordinary skill in the art would recognize that it would have sufficient cushioning and energy dissipative characteristics, or, for that matter, sufficient adhesion characteristics and shear strength, for example, to suggest its potential suitability for use in securing a backboard to a backboard frame. There is further no indication that a “flexible rubber” cured silicone adhesive would be regarded by persons of ordinary skill in the art as an equivalent to a double-sided adhesive tape structure having a foam center, nor that it would provide similar cushioning effects, as asserted by the Examiner.

Finally, the Examiner’s equivocal assertion to the effect that if it is known that a silicone adhesive works on a ball or on a surfboard to secure two items, “the artisan would conclude it *might* work on securing a backboard to its frame,” is especially telling. (Answer 9)(emphasis added). This assertion has, as a corollary, that the silicone adhesive *might not* work, and thus itself belies the conclusion that the use of silicone adhesive in lieu of double-sided adhesive tape would yield a *predictable* result, as required by the cited *KSR* obviousness rationale.

The Examiner’s latter contention, directed to the claimed invention being a use of a known technique to a known device, appears to metamorphize into an “obvious to try” contention. (Answer 11)(“Common sense would indicate that one of ordinary skill in the art would be motivated to try various adhesives that provide similar cushioning effects at a lower cost.”). The Examiner here does not even go so far as to assert or conclude

that a predictable result would be obtained by applying the known technique of using a silicone adhesive to a known basketball backboard and frame device. Presumably, then, the Examiner is again asserting that the person of ordinary skill in that art would conclude that this *might* work. This again does not establish that there would be a predictable result in the eyes of those skilled in the art.

The Examiner's analysis also does not support that the invention would fall into the category of being obvious because it is "obvious to try", which the court in *KSR* indicated might be applicable in certain cases. *KSR*, 550 U.S. at 421. The analysis presented presupposes that silicone adhesives, as well as possibly other adhesives, have "similar cushioning effects" at a "lower cost", as compared with the prior art double-sided adhesive tape. As we have found above, the record here contains neither persuasive evidence that silicone or other adhesives have the alleged similar cushioning effects, nor that the use of silicone or other adhesives would necessarily result in reduced manufacturing or material costs.

We find ourselves ultimately in essentially the same position as was the panel in the prior appeal in this application. The Examiner appears to again be taking the position that, "it would have been obvious to try any number of prior art adhesives until one possibly arrived at a successful result where the prior art gives no indication of which parameters are critical and no direction as to which of many possible choices is likely to be successful." (Decision 7). Even with the *KSR* court's advising that rigid adherence to a "teaching, suggestion, motivation" test is not necessary and is, indeed, improper, we conclude that the Examiner has not succeeded in establishing that the invention of claim 1 would have been obvious.

The rejection of claim 1 as being unpatentable over the AAPA in view of Chung, Hankele, Skedleski '316, Skedleski '314, and the Dow Corning data sheet, will not be sustained. Similarly, the rejection of claims 2, 5, 6, 14 and 15 grouped with claim 1 will not be sustained. As claims 44-53 were rejected on the same grounds which we have found to be insufficient in establishing the obviousness of claim 1, and all recite the use of an adhesive similar to that set forth in claim 1¹, the rejection of those claims will also not be sustained.

Claims 7-10 and 16-18--Obviousness--AAPA in view of Chung, Hankele, Skedleski '316, and Skedleski '314, the Dow Corning data sheet, and Official Notice taken that the use of glass bead spacers is well known in the art

Claims 7-10 depend from claim 1 and claims 16-18 depend from claim 14. The deficiencies, discussed above, in the evidence and rationale in support of a conclusion that claims 1 and 14 would have been obvious, are not remedied by the taking of Official Notice that the use of glass bead spacers is well known in the art. The rejection of claims 7-10 and 16-18 under 35 U.S.C. § 103(a) will thus not be sustained.

Claim 13--Obviousness--AAPA in view of Chung, Hankele, Skedleski '316, and Skedleski '314, the Dow Corning data sheet, and Official Notice taken that the use of printed images on a backboard is well known in the art

Claim 13 depends from claim 1. The deficiencies, discussed above, in the evidence and rationale in support of a conclusion that claim 1 would have been obvious, are not remedied by the taking of Official Notice that the

¹ Claim 44 calls for the use of a "catalyzed silicone-based adhesive", claims 46 and 48 (which, incidentally, appear to be identical in scope) call for the use of a "catalyzed elastomeric adhesive", and claims 50 and 52 call for the use of a "silicone-based adhesive". (Appeal Br., Claims Appendix).

use of printed images on a backboard is well known in the art. The rejection of claim 13 under 35 U.S.C. § 103(a) will thus not be sustained.

Claims 50-53--Obviousness--AAPA in view of Ichemco

The Examiner relies on the Ichemco reference as disclosing silicone adhesives. (Answer 7). From this, and the admitted prior art disclosing the use of a double-sided adhesive tape to attach a backboard to a frame structure, the Examiner concludes that,

[i]t would have been obvious to one of ordinary skill in the art to have selected any one of several *equivalent* adhesives, including the Ichemco silicon adhesive base [sic] on cost and design considerations. The mere selection of a well known adhesive and following the vendor's use instruction does not constitute a novel and patentable feature.

(Answer 7-8)(emphasis added).

This analysis and reasoning is flawed for much the same reasons as are discussed above with respect to the rejection of claim 1. To the extent that it is material to this analysis, neither the Ichemco reference nor the AAPA, nor anything else referenced by the Examiner, establishes that persons of ordinary skill in the art would regard the silicone adhesives disclosed in Ichemco as being equivalent to a double-sided adhesive tape, let alone a double-sided adhesive tape having a foam center. There is further no persuasive evidence drawn from the prior art that the use of one of the Ichemco silicone adhesives would result in cost reductions over the use of the double-sided tape. Finally, the Examiner has not specified what "design considerations" would actually be on the drawing board, were one of ordinary skill in the art to consider doing away with the double-sided adhesive tape in favor of some other attachment means.

The rejection of claims 50-53 under 35 U.S.C. § 103(a) over the AAPA in view of Ichemco will not be sustained.

CONCLUSIONS

The Examiner has incorrectly concluded that the subject matter of claims 1, 2, 5-18 and 44-53 would have been obvious in view of the references cited in the foregoing discussions.

DECISION

The decision of the Examiner to reject claims 1, 2, 5-18 and 44-53 is reversed.

REVERSED

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